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**Title :** Predation Behavior of Transient Killer Whales in Monterey Bay, California

**Category :** Behavior

**Student :** Not Applicable

**Preferred Format :** Either Spoken or Poster Presentation

**Abstract :** Monterey Bay with its deep submarine canyon lies within the rich upwelling ecosystem of the California Current and supports seasonally large and diverse populations of marine mammals. Transient killer whales though unpredictable in the area were photo-identified and predation events were videotaped on a year-round basis since 1987. During 82 events, California sea lions were most frequently consumed, followed by gray whale calves, Dall's porpoise, elephant seals, harbor seals, seabirds, and dolphin spp. Killer whales demonstrated different pursuit and attack strategies for each prey species, with the most time and effort invested in gray whales. The bathymetric features of the Monterey submarine canyon appear advantageous to killer whales while hunting gray whales. The largest killer whale groups (up to 32), most frequent sightings, and greatest number of individually identified whales occurred during spring. This period corresponds with the northern migration of gray whale cow/calf pairs. During 1999 and 2000, the lowest number of gray whale calves counted (per Wayne Perryman, NMFS) corresponded to frequent killer whale sightings but few attacks, suggesting killer whales may be spending more time in the area searching for calves. In comparison, during 2003, number of gray whale calf counts was high, corresponding to frequent attacks. Even with larger group sizes, only a few key whales (adult females with calves or male pairs) were actively involved in killing the calf. Many killer whales may benefit from feeding opportunities through the tremendous efforts of a few. Since reproductively active female killer whales were most involved in gray whale attacks with their offspring, their prolonged attacks on gray whale calves (up to 6 hr) compared to less than 2 hrs for a male pair may suggest that the mothers are instructing their young. Killer whales exhibited specific roles while cooperatively attacking and then feeding on gray whale calves.